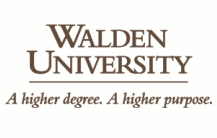

2016

The Use of the Illness Perception Questionnaire: Enhancing Clinical Staff Understanding

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This is to certify that the doctoral study by

Typhanie Beasley

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2016

Abstract

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by

Typhanie Beasley

MS, Walden University, 2014

BS, Denver School of Nursing, 2012

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

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Abstract

Women with Type II diabetes face unique challenges coping with the physiologic complications of the disease, which can be enhanced or hindered by their perception of their ability to effectively manage their diabetes. The Illness Perception Questionnaire (IPQ-R) is a tool that evaluates factors influencing patient-provider communication and assesses patient's perception of their health. Guided by the common sense model of self-regulation, this quality improvement project focused on familiarizing health care providers with the IPQ-R and evaluating their receptiveness to implement it with women with Type II diabetes. Seven Primary Care providers participated in an educational in-service that included information regarding the IPQ-R and its implementation in practice. Following the educational in-service, the participants completed a 10-question questionnaire evaluating the in-service and their likelihood of implementing the IPQ-R in their practice with women with Type II diabetes. According to the descriptive analysis of the questionnaires, 71% of the providers indicated that the IPQ-R would assist them when treating women with Type II diabetes and 85% of the provider's felt that the information presented during the in-service would enhance their confidence in using the IPQ-R in practice. The primary barriers to its use in practice were screening time and a lack of support staff. Implications for social change include improved treatment of women with Type II diabetes when using the IPQ-R, improved quality of health care, and enhanced cost effectiveness at the system level for chronic illness management and prevention. The IPQ-R can offer clinicians a reliable method to improve communication and psychosocial support necessary for the successful management of Type II diabetes in women.

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Dedication

I would like to dedicate this quality improvement project to all my female patients I have had the honor of caring for in my clinical practice. My passion to find improvements in the treatment of type II diabetes among women is driven by the struggles I have watched my mother go through.

In addition, I would like to extend my sincere gratitude to Dr. Deborah Lewis who helped me turn this passion into a scholarly work of art. May this great work serve to fill and improve the communication gap within the patient provider relationship, by advocating for the best quality of care to improve their overall independence and quality of life.

Acknowledgments

Completion of this life long academic journey with my doctoral degree is finally a reality, however my accomplishment has been a direct result of the love and support of the people nearest and dearest to me, who have been blessings in my life so that I can be a blessing in the lives of others. I would like to thank God and Jesus Christ for making all of this possible and putting the write people in my life to make this dream come true. I would like to thank my husband Alan D. Beasley Jr., who spent countless nights staying up with me and pushing me to do my best when I thought I could do no more. I thank you for all your support and being who I couldn't be to our family while allowing me to chase my dream. I love you more than you will ever know. I also want to thank my children Jai'lyn and Ayi'den for tolerating my time away from you during this process, and for your understanding through all of this. I hope my life is a great example to you to never give up on your dreams and that through Christ,, all things are possible. I would like to thank my mothers Angela M. Lofton, and Barbara J. Beasley, Fathers Mykale Lofton, and Alan D. Beasley Sr, and Tammy Manganeli, along with many others for their support, wisdom, and guidance through out my academic endeavor. Your many contributions have greatly impacted this doctoral candidate to be a blessing in the lives of the many patients I have the honor of seeing.

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Section 1: Nature of the Project

Introduction

Chronic illnesses are a challenge for health care providers to manage and can also be difficult for patients to understand and manage independently after diagnosis (Ahlin & Billhult, 2012). Women diagnosed with diabetes may struggle with feelings of losing the spontaneity within their lives as a result of caring for their disease. Patients may avoid caring for themselves, may be reluctant to learn about diabetes, and may become overwhelmed and despondent with the information provided to them during office visits with their health care providers (Ahlin & Billhult, 2012). Patients struggle with long-term, self-care efficacy of diabetes. As a result, patients are often admitted and readmitted to the hospital for diabetic complications (Ahlin & Billhult, 2012). However, not all readmissions are solely due to knowledge deficits; some readmissions could be prevented if the information provided is presented in a different way. Health care providers have an obligation to their patients to increase patient self-care efficacy and to prevent admission to hospitals associated with complications for uncontrolled diabetes due to knowledge deficits.

Philosophical beliefs regarding medicine and the treatment of chronic illness have influenced patient adherence to treatment plans and decisions ("Self-Care Deficit Theory," 2013). Identifying the patient's beliefs and knowledge deficits can lead to improvements in care, quality and management of chronic illness (Broadbent, Petrie, Main, & Weinman, 2006). Glanz, Rimer, and Viswanath (2008) identified the perceptions of illness and knowledge deficits in the treatment of patients with Type II

diabetes and outlined the efforts to reduce complications and hospital readmissions. Identifying the underlying causes of the patient's nonadherence can also reduce health care costs and use of additional resources.

Problem Statement

Diabetic women who are not engaged in a supportive exchange of communication between themselves and their health care providers may experience anxiety, become overwhelmed, have poor patient outcomes, and have a worsening of the diabetic disease. An unsupportive health care environment where communication between diabetic women and health care providers creates an environment of missed opportunities to improve the quality of life for this population of patients. The management of diabetes for females can be overwhelming, as it requires substantial lifestyle changes. Understanding the successful management of Type II diabetes requires daily monitoring, and the effects that the disease has on the body are often difficult for patients to accept on a daily basis. Persistent hyperglycemia culminates in negative metabolic processes that often lead to hospitalization (Baggio, Aparecida, Silva, & Lima, 2013). Therefore, to successfully improve patient outcomes and reduce hospital admissions, providers need to identify the perception of illness of the patients, identify their potential risk for harm, and educate and equip patients with the tools to properly manage their illness on a long-term basis.

Purpose Statement

The purpose of this project was to develop and implement an education module to familiarize health care providers with the use of the IPQ-R in clinical practice and to enhance the knowledge base of providers caring for women with Type II diabetes to

prevent future complications and improve their quality of life based on their perceptions (Broadbent et al., 2006).

Project Question

Can the implementation of an education module help practitioners integrate the IPQ-R to reduce the number of complications in adult onset diabetes in women?

Relevance to Practice

Baggio et al. (2013) suggested that knowledge about Type II diabetes and its causes are often one-dimensional and pragmatic. In addition, having knowledge about the disease does not necessary ensure positive behavior changes in patients; but, education obtained from providers helps the patients to recognize the lifestyle habits that possibly contributed to the onset of the disease. This education aids in the patients' understanding of behavior modification, thereby preventing aggravation of the complications that warrant hospitalization (Baggio et al., 2013).

Contributing Factors to Nonadherence in Female Patients

Psychological factors have been linked to regimen nonadherence. Health beliefs such as the perception of illness, illness acuity, patient vulnerability to complications, and the efficacy of treatment are factors that can predict better compliance (Delamater, 2006). Maladaptive coping techniques and increased levels of stress have been associated with compliance problems. In fact, greater levels of social and diabetes support from spouses and other members of the family are concomitant with enhanced regimen agreement to further improve the quality of care for women with diabetes. In addition, support from nurses, providers, spouses, and case workers are warranted to promote amenability to

care plans (Delamater, 2006). Recurrent e-mails and telephone calls to patients aid in the promotion of regimen adherence that can lead to improvements in glycemic control, blood pressure, and lipid levels by 10% (Delamater, 2006).

Negative feelings about Type II diabetes have a direct correlation with complications of the disease and women's cultural, social, economic, and motivational factors (Care, 2002). Using the IPQ-R has the potential to bridge the gap with evidence based practice EBP to identify preventable complications related to Type II diabetes. The IPQ-R aids in the prevention of complications by assessing the patient's knowledge base regarding the illness and alerting physicians to education that can help the patient make better decisions, thereby preventing the development of complications.

Nonadherence rates for diabetes regimens and lifestyle changes are around 50% ("Chronic Care Model," 2015). As a group, patients with diabetes have been prone to regimen adherence problems. The course of therapy for women with diabetes tends to be multidimensional; but, adherence to one regimen does not correlate to the adherence to other regimens. In fact, women are more compliant with medications than with lifestyle modifications. Delamater (2006) found that 65% of women complied with diet changes; yet, only 19% complied with exercise. Further quality improvement is warranted to bridge this gap in care.

Implications for Social Change in Practice

The current standard of care provided to female patients with diabetes often includes a plethora of information with the expectation that it will be enough for them to be successful in managing their illness. Identification of patients' perception of illness

should be sought (Care, 2002). Administering the IPQ-R as a communication guideline in practice can promote social change by breaking the communication barrier between patients and providers to ensure better outcomes for women in the management of Type II diabetes

This project can provide a foundation for adequate diabetes management and improvements in the care of women with Type II diabetes. Based on the increasing rates of diagnoses, quality improvements are necessary to successfully manage and reduce complications/hospitalizations of Type II diabetes (Care, 2002). Due to the increases in diagnoses rates of diabetes, health care practitioners must also identify the underlying causes that are associated with complications. As a result of this project, the knowledge of doctorate-prepared nurses caring for patients with diabetes will expand, improving their ability to reduce patient complications within all populations and promote positive social change in practice (Grove, Burns, & Gray, 2013).

Definition of Terms

The terms pertinent to this study are the following:

Illness Perceptions Questionnaire Revision: An assessment tool created to assess the illness perceptions that could be useful in high risk populations to customize care plans to address the needs of each individual person (Broadbent et al., 2006).

Nonadherence: The term used to identify when patients do not continue with the agreed care regimen of treatment under limited supervision when faced with conflicting demands.

Self-efficacy: The term used to identify an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments (American Psychological Association, 2016, p. 2).

Type II diabetes: Also known as adult–onset or non-insulin-dependent diabetes, Type II diabetes is a chronic condition that affects the way the body metabolizes glucose, which is the body's main source of fuel (Davidson & Moreland, 2013, p. 1). With this particular type of diabetes, the body tends to resist the effects of insulin produced, or fails to produce enough to maintain normal levels in the blood.

Assumptions

Across the health care continuum, it is often assumed that women diagnosed with diabetes have been educated and equipped with the proper tools to manage their illness independently and adequately (Care, 2002). This assumption is dangerous for diabetes management, especially for women (Li, Drury, & Taylor, 2014). Furthermore, it was assumed that if practitioners implement communication tools such as the IPQ-R as a guideline in an out-patient clinical setting, then it will reduce the disruption in communication between female diabetes patients and providers, creating better follow-up appointments and productive time use. The implementation of the IPQ-R as a communication guideline may reduce anxiety for women in the management of Type II diabetes.

The burdens associated with diabetes can cause difficulties throughout the various stages of a woman's life ("National Diabetes," 2014). Interaction on a regular basis with a supportive team that addresses the perception of illness throughout each stage of a

woman's life is essential for long-term management. Each woman is at a specific phase of life that calls for individual guidance and support from their health care team. Therefore, the use of the IPQ-R as a clinical guideline in the management of Type II diabetes was chosen for this doctoral study as a result of the feelings experienced by women in the management of Type II diabetes. The use of the questionnaire as a communication tool would be helpful in improving the exchange of information between patients and providers. The information gathered from the IPQ-R will help the health care team provide the patient with the psychosocial support necessary during each stage of life. The implementation of this tool in clinical practice may increase the value of the patient provider relationship and the amount of time spent with each appointment/encounter (Care, 2002).

Limitations

The use of the IPQ-R as a guideline in clinical practice has the potential to increase the effectiveness of the way in which health care is provided for all patients with Type II diabetes. There are limitations for this communication tool. This tool has been used in other practices, such as psychology, and with other chronic conditions, such as renal failure and hypertension. In the review of literature on Type II diabetes, there were few tools mentioned on the improvement of diabetes care, management, and treatment. I recognize that communication is vital to the treatment of this illness and that the IPQ-R tool only addresses one area of many in the communication and management arena of the patient-provider relationship.

Summary

There is a need for greater diligence on the part of health care teams that currently provide care for diabetes patients. The use of the IPQ-R, when used periodically, may highlight the areas where the patient needs further instruction and alleviate knowledge deficits by providing education to successfully manage their illness (Broadbent et al., 2006). Furthermore, this tool allows providers to recognize the history of each diabetic patient, seeking to understand their experience and knowledge about the illness in efforts to develop specific health care instruments for the individual and make them more autonomous in their disease management (McSharry, Moss-Morris, & Kendrick, 2011).

Section 2: Review of Literature and Theoretical and Conceptual Framework

Introduction

The common sense model developed by Levanthal (1992) was used to guide my DNP scholarly project. This model provided a foundation to help providers understand the beliefs that are associated with female diabetics and the components that influence the implementation of provider-initiated and self-management goals and strategies. The common sense model (CMS) includes a focus on the individual's idea of health and illness (Paddison, Alpass, & Stephens, 2010) According to the CMS, the patient is the problem solver, and the person's representation of illness is the primary cause of the behavior and actions that can and will lead to them making better common sense choices related to their illness (Paddison et al., 2010). Using the CMS for the project allows for growth for each patient and provider interaction. The CMS addresses the communication gaps that currently exist within the provider-patient dynamic. Using the model allowed the providers to identify the deficit of knowledge within the patient's own personal care (i.e., obesity, diabetes, hyperlipidemia) and correct it by educating the patient and applying interventions as needed. In this case, the provider yields care for the patient in a manner that educates the patients to be a partner instead of a dependent of the health care provider (McEwen & Wills, 2014, Chapter 2).

The CMS and the IPQ-R questionnaire can ensure successful diabetes management among women ages 35-60. A thorough assessment using the IPQ-R questionnaire can improve communication and identify the deficits in care with the consideration of individual coping skills/strategies, culture, and age. With the

communications lines open, the provider is able to foster a learning environment specific to the needs of the patient and better equip the patient for independent management of their condition (Li et al., 2014).

Specific Literature

McSharry et al. (2013) suggested that use of the IPQ-R in practice is associated with 10% lower HbgA1c results, and it aids in care plan development based on the knowledge deficits and beliefs of patients that contribute to nonadherence. When health care workers examine the beliefs of patients regarding their illness, they understand what contributes to deficits in their disease management and lifestyle modifications (Care, 2002). This information translates to exercise, dieting, and medication obedience in diabetic women. The perceived risks foster a more coherent conceptualization of the relationship between a person's diabetes and self-care behaviors and other associated complications of this illness (Shreck, Gonzales, Cohen, & Walker, 2014).

Baseline illness/risk perception subscales are significant predictors in glycemic control and self-care behaviors in women. Women with diabetes can become overwhelmed with the amount of work it initially takes to manage their condition and are plagued with uncertainty of where to begin or how to properly manage their condition. This lack of information has been identified as one of the leading contributors to hospitalizations (Li et al., 2014). Successful management of diabetes starts with the assessment of what a person believes and how much is known to bridge the gaps necessary to properly cope in accordance to the stage of life the individual is in (Care, 2002).

Researchers have provided indications of improved coping skills as a result of the information gained from the IPQ-R questionnaire. It has allowed providers to develop bespoke care plans that were direct links to successful management (Shreck et al., 2014). Employment of this assessment tool has proven useful in clinical practice by providing a foundation to construct patient treatments that associated with high rates of compliance and skills to recognize signs of potential complications before hospitalization.

General Literature

Illness perceptions are organized cognitive depictions or beliefs that patients have about their particular illness. When it comes to the treatment of diabetes in women, these perceptions have been identified to be significant determinants of behavior and are frequently associated with a number of outcomes, such as functional recovery and treatment plan adherence (Petrie, Jago, & Devcich, 2007). There is a consistent identity component that is directly related to the name of the illness and the ranges of symptoms that the patient believes are associated with the disorder. Therefore, when it comes to illness perceptions, there are two important attributes to consider: (a) patients' perceptions vary widely and (b) patients' beliefs about their conditions are different from the providers who manage them (McSharry et al., 2011). Most medical staff are unaware of patients' ideas and their perceptions of their acuities regarding their conditions because most providers do not take the time to ask or consider how they feel (Petrie et al., 2007). Schoenberg and Drungle (2001) identified the following barriers to treatment of diabetes in women:

1. Inadequate health literacy/marginal health literacy limits the person's ability to care for his or her condition
2. Diet-proper education on nutrient rich foods that are recommended for consumption
3. Blood glucose monitoring or daily glucose monitoring to keep track of peaks of glucose levels
4. Exercise-completing at least 30 minutes of activity a day (i.e., walking, bicycling)
5. Medication-lack of understanding as to what their medications do and how they work
6. Foot care-seeking proper foot care or obtaining education to care for their feet at home
7. Interactions with health care providers-regular interactions with health care providers to aid in successful management of diabetes (p. 446).

Due to these barriers, some women are often unsuccessful with diabetes management resulting in hospitalization or amputations of lower extremities.

Petrie et al. (2007) identified that the perception of illness as a significant predictor of whether patients will be compliant with exercise and dieting. Identifying illness perception has helped to predict patient's self-efficacy, particularly the ones who are admitted to the hospital with complications of Type II diabetes. Moreover, the assessment of illness perception (IP) does contribute to the predictions of women attending diabetic education and care plans adherence, especially when beliefs about their

illness could be controlled or cured (McSharry et al., 2011). IP could be considered and implemented as the standard of care initially and periodically during the treatment and management of diabetes in women (Shreck et al., 2014). By using this assessment tool in practice, providers would also be complying with the Healthy People 2020 clinical goal of reducing economic burden of diseases and improving the quality of life for those with diabetes or those at risk for developing diabetes.

Background Context

Health care is an essential need throughout life. People are often faced with different illnesses and health challenges that create periods of dependence upon family members and health care providers to help, guide, and educate them in the management of ailments. For many years, diabetes has been on the rise and has been identified as the seventh major cause of death in the world ("Type 2 Diabetes," 2015).

Type II diabetes was first identified in Egyptian manuscripts dating back to 1550 BCE. At that time, the Egyptians would identify the disorder by determining if ants were attracted to the person's urine (Porter, 2013). The term diabetes in Greek means to "pass through" and was given the name based on its symptoms of excessive passing of urine (Porter, 2013). As time progressed, many attempts to understand, treat, and cure this disease ensued. In 1910, Sharply-Shafer identified that diabetes was the body's inability to produce insulin to use glucose (Porter, 2013). In 1921, Banting and Best extracted insulin from dogs to treat other diabetic dogs to observe the effects of the disease and decrease premature death (Porter, 2013). Their research has been used to help use insulin

from bovine sources to treat diabetes in humans. In the 1950s, the first medications were developed to treat the symptoms and complications of diabetes.

Health care providers have attempted to find a cure for diabetes and reduce complications associated with the disease. Providers have used evidence to increase the quality of life of people affected by this illness (Narayan, Boyle, Thompson, Sorensen, & Williamson, 2003). Over the years, health care providers, researchers, and scientists have identified plans, tools, and medications that help patients to manage their illness. While rates of obesity continue to increase, providers must provide evidence-based information to patients to reduce the difficulties of managing this chronic condition. The information discovered can provide more strategic methods to increase self-efficacy and independence of diabetes management (Narayan, Boyle, Thompson, Sorensen, & Williamson, 2003).

Summary

Overtime diabetes has been identified and treated utilizing many different systems, medications, and technologies that have provided improvement throughout the ages. Each stage in treatment was an attempt to help people living with the disease the ability to manage it and increase self-efficacy. From the Egyptians to the our modern day methods, each step has brought us forward in providing adequate care and education to the diabetic population in efforts to increase their quality of life while managing this chronic condition. In the next section, the methods of familiarizing the providers with the Illness Perception Questionnaire will be discussed, along with the context for the doctoral project and the population the project was designed for.

Section 3: Methodology

Introduction

The purpose of this DNP project was to familiarize providers with the IPQ-R in a primary care setting and to educate them on the usage of the IPQ-R tool in clinical practice with instructions on how to and when to use the tool within an outpatient primary care setting The IPQ-R can be a useful tool in the treatment of women with Type II diabetes.

Context for the Doctoral Project

The intended practice setting for the quality improvement doctoral project took place in an outpatient clinic setting in Denver, Colorado. The main purpose for this quality improvement project was to familiarize practitioners with the IPQ-R questionnaire to improve their communication with their patients. The descriptive design of the education in-service was aimed at predicting or describing a problem at the time of the project.

The DNP project was carried out in two phases. The first phase was the development of an educational module. The second phase of the project was the in-service whereby the selected providers were familiarized with the IPQ-R. Prior to the aforementioned in-service, the providers were given a demographic questionnaire (Appendix A). In the second phase of the DNP project following the in-service on the IPQ-R, the providers were provided with a self-completed, yes/no questionnaire (Appendix B) that measured their knowledge and opinions/attitudes about the in-service on the IPQ-R.

Population and Sampling

The quality improvement DNP project was constructed to familiarize providers with the IPQ-R and to explain the benefits of its use in clinical practice to improve communication within the patient provider relationship with women diagnosed with Type II diabetes in an outpatient primary care setting in Denver, Colorado. Requirements for participation in this phase were as follows: a physician or nurse practitioner involved in diagnoses and treatment of diabetes within the outpatient primary care setting with at least II years of experience with women with Type II diabetes, or who was a certified diabetes educator at the time of the project. The participants were asked to participate in an in-service that I presented to acquaint them with the use of the IPQ-R assessment tool. Prior to the start of the in-service, the providers were given a demographic questionnaire that identified their years of practice, age, ethnicity, race, education, profession, and marital status.

Phase II involved the distribution of a self-completed, yes /no questionnaire to measure the provider's attitudes and knowledge regarding the in-service that I provided on the IPQ-R. The providers (four medical doctors [four men] and three females [diabetic educator NPs]) were invited based on their medical capability, knowledge, and ability to treat, diagnose, and educate women with Type II diabetes and their potential to use the IPQ-R in practice. The in-service on the usage of the IPQ-R was scheduled over the lunch hour (1200-1300) in the conference room to allow for quiet and privacy. There were a total number of seven providers that agreed to attend the IPQ-R in-service.

Data Collection

Approval was sought from the Walden University Institutional Review Board (IRB). All of the providers of Colorado Family Practice clinic had agreed to participate in the proposed evidence-based project.

Human subjects involved in the use of the project must be protected. Efforts taken to ensure the (a) minimization of risks to the project, (b) provisions for adequate data monitoring and collection were in place, (c) fair selection of subjects, (d) voluntary participants were given informed consent, (e) risks that can be identified were rational in relation to the projected benefits, (f) confidentiality and privacy were sustained, (g) conflicts of interest were identified and appropriately maintained, (h) proper training of selected project personnel was concluded, and (i) vulnerable populations were protected if applicable (Moss et al., 2010).

To protect the participating providers' human rights, information related to the self-completed questionnaire was provided, and it included an outline of expectations regarding their involvement in the project. This outline included the risks and benefits of participation, expectations of involvement, confidentiality related to the project, and contact information for questions or concerns related to the ethics of the project.

Prior to the start of the IPQ-R in-service, the providers were given a demographic questionnaire; no names or identifying information was used for privacy purposes. The demographic questionnaires were returned back to me and sealed in an envelope for travel. The in-service was scheduled for 1 hour and included a session for clarification and questions. I created an educational Power Point presentation on the IPQ-R for the

providers to keep and use as a resource. Following the IPQ-R in-service, the providers were given a self-completed questionnaire that I prepared from the evidence-based literature, consisting of 10 questions, which also consisted of a nominal *yes* or *no* scale. The objective of the self-completed questionnaire was to collect information to investigate, assess, and understand the experience of using the IPQ-R in treating Type II diabetes in women. The questionnaire was given to the participating providers and returned to me after the 1-hour in-service.

Data Analysis

Data analysis for the DNP project included an evaluation of the responses provided from the providers on the self-completed yes/no questionnaire. The data gathered provided findings that can be used to design future education in-services and provider workshops to enhance the skills and knowledge of providers on the IPQ-R (Broadbent et al., 2006). The demographic questionnaires provide the readers with background information on the level of education and experience that the in-service was created on and the results were based (Terry, 2012).

The self-completed yes/no questionnaire used a nominal scale, and the majority of the data that were obtained were in the form of (yes or no responses) binary data using a median split and were analyzed as proportions using splits. Responses to each question on the self-completed questionnaire were assigned a number, with yes being 1 and no being 2. Frequency analysis was used for these data because nominal data can be analyzed using percentages and mode, which was a representation of the most common responses (Melnyk & Fineout-Overholt, 2005).

Project Plan Evaluation

The evaluation process for this project included the aforementioned Phase I and Phase II evaluation processes, which included the responses and assessments from the providers and the data to ensure that the in-service delivered the most up-to-date information and recommendations for the use of the IPQ-R in the primary care clinical setting. The self-completed questionnaires did not have scoring criteria specific to high or low (high or poor) quality guidelines. Therefore, the scores provided were evaluated with the assumption that the higher the scores (yes), the greater quality of the in-service. This project can be the basis for further educational in-services/workshops for the use of the IPQ-R in clinical practice by medical professionals. Their usage demonstrates the effectiveness of the in-service for women diagnosed with Type II diabetes within various stages of life.

Summary

Quality improvement in the care and management of diabetes is a priority in a lot of primary care outpatient clinics. The need to understand and address the source of the underlying issues in patient compliance has been directly related with patients' perceptions of the illness (Petrie et al., 2007). The IPQ-R tool can lead to improved care, communication, and adherence. Clinicians can use the information gathered from the project to improve their quality of care.

Section 4: Findings, Discussion, and Implications

Introduction

The purpose of the project was to familiarize health care providers in the family practice setting with the IPQ-R in order to assist them in the treatment of women with Type II diabetes. The education of the providers plays a role in the treatment of Type II diabetes in women in primary care, from the initial diagnosis and throughout the treatment of the illness. The aim of the DNP project was to familiarize the providers with the IPQ-R using evidence-based information and peer-reviewed literature on the IPQ-R. I reviewed the literature regarding the treatment of Type II diabetes in women and identified the need to introduce the questionnaire into primary care practice in Colorado.

In this section of the DNP project, I will present the findings of the project, goals, objective, implications for practice, the projects strengths and limitations, and the self-analysis in relation to the overall development of the project. The findings and conclusions of the project within the context of the theoretical framework and applicable literature will also be discussed. Lastly, a self-examination of my role as a DNP student, scholar, project manager, practitioner, and professional, along with the details on how managing this project related to my future goals as a health care professional, will be discussed.

Summary of Findings

A total of seven providers accepted the invitation to the in-service on the IPQ-R where they were familiarized with the questionnaire. Many conversations and e-mails were conducted, resulting in the scheduling of the in-service, as well as reminder calls to

ensure the providers did not forget to attend. I prepared a presentation binder for the participating providers as a resource that contained the IPQ-R and other relevant evidence based information on the use of the IPQ-R in practice. Each participant was provided with a consent form and was asked to complete a demographic survey that consisted of questions on age, culture/race, gender, education, occupation, and marital status. The contents of the resource manual (the IPQ-R/ scoring/ background information) were referred to during the in-service. The in-service discussion lasted about 50 minutes, which included questions and further discussion on the IPQ-R. After the in-service to familiarize the providers on the IPQ-R was completed, I gave the providers 15 minutes to ask questions. Each provider was given a self-completed survey (Appendix A) to answer and return by the end of the in-service. All of the providers stayed the duration of the in-service and completed the self- completed survey (Appendix A).

Discussion of Findings in the Context of Literature

The variables from the demographic survey are shown in Table 1. The information gathered from the table is reflective of the level of education, martial status, age, and gender of the participants of the educational in-service. The demographic information is pertinent to the reading audience the quality improvement project is aimed towards, and helps to provide and understanding as to why these participants were chosen as part of the quality improvement study.

Table 1

Demographic Survey

Variables	Number	Percent
Age:		
30	3	43%
40	1	14%
50	3	43%
Gender:		
Male	4	57%
Female	3	43%
Race/Ethnicity:		
White	5	71%
Hispanic	2	29%
Asian	0	0%
African American	0	0%
Education:		
Medicine	4	57%
NP	2	29%
DNP	1	14%
Marital Status:		
Married	7	100%
Non-Married	0	0%
Board Certification:		
MD (Family Practice)	2	28.5%
DO (Family Practice)	2	28.5%
NP (Family Practice)	3	43%
Years in Practice:		
0-5	2	28.5%
5-10	2	28.5%
10-20	3	43%
30-40	0	0%

Each of the participating providers completed a demographic survey. Participants of the IPQ-R in-service consisted of seven providers, four men and three women. Two of the providers were medical doctors, and the other two remaining participants were doctors of osteopathy. The three female providers were NPs; five of the providers were White, two were Hispanic, and all of the providers were married. In terms of age, three of the seven providers indicated that they were in their 30s, one indicated 40s, and three indicated they were in their 50s. The participant sample for the DNP project was *n*=7, and the mean age was 44 years with the mean range of years in practice at15. In terms of the providers' education level, 57% were educated as medical doctors, and one provider was a DNP; the other two providers had master's degrees as nurse practitioners. The physicians all had board certifications in medicine; the nurse practitioners were also board certified as family nurse practitioners and worked in primary care. One provider had nearly 18 years of experience working with women with Type II diabetes. All of the providers had various degrees of experience with women with Type II diabetes, and half of them had some knowledge about the IPQ-R and agreed that it might be helpful in the treatment of women with Type II diabetes.

Self-Completed Survey on the IPQ-R In-Service

The participants were given a self-completed questionnaire that had 10 yes/no questions to collect information on their personal experience with the in-service and on how familiar they were with using the IPQ-R in practice. Following the in-service, each provider was provided with the questionnaire to evaluate the in-service in terms of gathering, analyzing, and employing the information to answer questions regarding the

programs, policies, and projects (Terry, 2012). The self-completed questionnaires provided me with a good measure of the providers' perspective of the value and quality that the IPQ-R has in the treatment of Type II diabetes in women.

Self-Completed Survey on the Illness Perception Questionnaire

Table 2

Self-Completed Questionnaire

Question Number	Question Text
Question # 1	1. Do you use the Illness Perception of Illness Questionnaire (IPQ-R) with women diagnosed with type II diabetes in your practice?
Response:	Yes (0) participants No (7) participants
Question # 2	What factors contribute to the difficulty in treating type II diabetes in women in the primary care setting?
Response:	Other medical conditions; Not enough time; medication non-compliance; lack of support
Question # 3	Do you believe that this Illness Perception Questionnaire (IPQ-R) will assist you in treating type II diabetes in women in the primary care setting?
Response:	Yes (5) participants No (2) participants
Question # 4	Do you believe that the information provided in the in-service will assist in your treatment of women with type II diabetes?
Response:	Yes (6) participants No (1) participant
Question # 5	Did this in-service education provide you with the confidence to use the (IPQ-R) ?
Response:	Yes (7) Participants No (0) Participants
Question # 6	Do you feel that the educational in-service was helpful and provided you with a new perspective of type II diabetes treatment?
Response:	Yes (5) participants No (2) participants
Question # 7	After attending the in-service, do you feel that women with type II diabetes should be treated clinically using the IPQ-R ?
Response:	Yes (6) participants No (1) participants
Question # 8	Do you think that the IPQ-R can prevent behavioral complications associated with type II diabetes?
Response:	Yes (5) participants (identifies their weakness; identifies why they think a certain way; Identifies the why behind the what) No (2) participants (behaviors are a choice; perception of illness will not prevent free will; can counsel patients on behaviors without the IPQ-R)
Question # 9	Do you plan to implement the IPQ-R as part of your routine treatment process of type II diabetes in women?
Response:	Yes (4) participants No (3) participants
Question # 10	Are there resources available to support female patients in your practice and community?
Response:	Yes (0) No (7)
Question # 11	What barriers might prevent you from using the IPQ-R in your practice?

Response: Time; lack of staff.

The participating providers were provided a self-completed questionnaire with a total of 11 questions (yes/no) to collect information on their experiences and thoughts on the in-service and how familiar they were with the use of the IPQ-R. After the IPQ-R in-service, each provider was given the questionnaire, which had no personal identifiers. After completing the questionnaire, all of the providers gave them back to me. For the purpose of the DNP project, the questionnaires were used as a program evaluation as a means to analyze information to answer questions about future in-services (Kettner et al., 2008). The self-completed questionnaires provided me with a measure based on the provider's perspective of the quality and value of the IPQ-R as an assessment instrument in the treatment of Type II diabetes in women.

Discussion of Findings

All of the participating providers admitted that none of them use the IPQ-R in practice. In response to the second question, the answers received were the following: other medical conditions (HTN, kidney failure, and pain), time (not having enough time to address all of the patients' needs in one visit), a lack of support (not enough resources available for patients), and medication noncompliance. According to the findings, there was a lack of community resources and support when treating Type II diabetes in women. This makes treating this chronic condition difficult for both patients and providers in primary care. An assessment tool such as the IPQ-R can be helpful in identifying areas to address that may prevent future behavioral complications in the treatment of Type II diabetes in women by focusing the visits on the needs of the patients. One of the

providers stated that if primary care providers have a negative point of view in treating women with Type II diabetes due to the lack of time and resources, they will be reluctant to use the IPQ-R in practice because they may feel that it further complicates treatment and wastes time.

The majority of the providers (71%) felt that the IPQ-R would be useful in the treatment of Type II diabetes in women in the primary care setting; 85% of the information provided during the in-service was found to be helpful in the treatment of this condition and provided the clinicians with the confidence to use the IPQ-R in practice. Prior to the in-service, none of the providers were aware of the IPQ-R or its use in clinical practice. Furthermore, 85% of the providers said that after attending the in-service, women with Type II diabetes should be treated clinically using the IPQ-R to improve outcomes and provide the mental support necessary for female patients. One provider felt that women with Type II diabetes were at higher risk for complications because they are often single mothers and do not have the support or resources to comply with treatment plans, further making treatment complicated and unsuccessful.

The majority of the participating providers (57%) said they would use the IPQ-R in practice, but felt that time was a constraint. All of the providers stated that support groups and other community resources were needed to make treatment more successful amongst women with Type II diabetes and that the IPQ-R would be a good tool to use in that process.

According to the answers provided from the survey, primary care practice providers should use the IPQ-R for the treatment of Type II diabetes in women. The IPQ-

R will not only provide the providers with confidence on how to use the tool in practice, but also provide patients with the psychosocial support that is currently lacking from their visits.

Implications for Practice

The IPQ-R may affect the way that women with Type II diabetes are treated in the primary care setting. Currently, many providers have time constraints that prevent them from addressing all of their patients' needs, including the psychosocial aspect of this illness. With the IPQ-R in-service, providers will have a means of identifying the needs of their patients and use their time to address those needs, making the provider/patient encounter more beneficial. This in-service may help to increase the primary care setting clinician's awareness of the IPQ-R and its benefits in the treatment of Type II diabetes in women (Broadbent et al., 2006).

Implications for Future Research

Due to the DNP project size, and the limited use of it in one primary care setting, future research studies are necessary on the development of future in-services to improve staff/provider knowledge on the IPQ-R. The results for the IPQ-R in-service in this project, though small, were advantageous with the majority of the providers feeling more confident and educated on the IPQ-R and its use with Type II diabetes in women. Continuing the project on a larger scale with numerous primary care practitioners who treat women with Type II diabetes may help determine the IPQ-R's in-service's benefits for this patient population.

Implications for Social Change

As a result of The Affordable Care Act, there has been an increase in the number of patients seeking treatment of their ailments from general practitioners and primary care providers. The IPQ-R in-service will help the providers in this clinical setting keep the cost of health care down by being able to successfully treat and manage women with Type II diabetes. Thus, it is imperative for all primary care providers to be able to effectively treat diabetes using an evidence-based screening tool to advance patient satisfaction and management of this chronic condition. After using the IPQ-R in this DNP project, the participating PCPs felt confident that they could use this tool successfully in the treatment of Type II diabetes in women, and that the patients would feel like they are getting more out of their visits with their providers.

Although this project is small (was not used with a larger clinic base), I was able to identify the increased need for provider education and patient resources, such as the IPQ-R, to improve the treatment of Type II diabetes in women and their quality of life. Future researchers with larger populations may be able to demonstrate that the use of this tool in clinical practice in the primary care setting may reduce health care costs, possibly reducing the hospital admissions and further costly complications.

The Strengths and Limitations of the Project

Limitations

One of the major limitations of this project was that the in-service on the IPQ-R for use in clinical practice would need to be done to further validate its usefulness in more diverse primary care clinics. The sample consisted of seven subjects, which does

not provide enough feedback; therefore, the results of the study cannot be widespread or generalizable. Furthermore, the DNP project was limited to a small primary care practice where the IPQ-R in-service was used for the care of women with Type II diabetes; thus, the project findings were not generalized to men. More research will be necessary to expand the focus of the use of the in-service in both more primary care settings and in its use in the treatment of Type II diabetes in men as well.

Strengths

Educational in-services on the IPQ-R in clinical practice can improve the quality of health care and increase the quality of life and efficiency of the way that women with Type II diabetes receive treatment. Because there were few evidence-based articles available in the literature, this DNP project holds the potential for a significant impact on the treatment of Type II diabetes in women. Due to the absence of other educational in-services on treatment tools, it is likely that the primary care providers would be open to the use of a standardized/universal tool such as the IPQ-R to use in the treatment of female diabetics. The opinions of the providers were mostly positive and added weight to the idea of the use of the IPQ-R in the treatment of Type II diabetes in women, but were also suggestive of further research to help disseminate the use of this tool in practice.

Analysis of Self

As a practitioner and educator, I believe the DNP project increased my experience as an educator. I also believe it enhanced my credibility within the women's health and diabetic community within my organization. Reflection of this project will provide an analysis of myself being a project developer, practitioner and academic scholar, as well

as provide information on the implications of the DNP project toward future professional development. During the project development, I remained neutral throughout the process and was able to embrace and utilize feedback and constructive criticism. The different opinions of the providers regarding the treatment of type II diabetes was interesting yet informative because of their difference in years of experience in treating this illness, and their different learning styles.

Project Developer

I believe that I have done a decent job as a project developer. Previous to this DNP project, I had no previous experience in developing and writing a publication of this magnitude. So while developing this project, I also learned the best ways to implement, and evaluate this assignment in a successful manner. The purpose of my DNP project was to develop an education in-service on the IPQ-R to increase staff/provider knowledge and explore the attitudes, knowledge and opinions of the providers after participating in the in-service. There was no significant information regarding the attitudes of providers towards the IPQ-R in the primary care setting. This lack of information opened up the door to further research and obtain this information, for this data can improve the standard of care and treatment of type II diabetes in women. I plan to utilize the data from the participating providers to assist medical decision makers to encourage further research on the use of the IPQ-R and future education in-services to include more diverse practices. As a result of this DNP scholarly assignment, I believe it provided me with vital experience as a project developer/manager that I can utilize in the near future for other projects regarding diabetes care in women.

As A Practitioner

The Affordable Care act and the increasing need for primary care providers increased the demand for advance practice nurses. As a result of obtaining my FNP from Walden University in 2014, I believe that I have been well equipped to provide the care needed and further my career as a new DNP. Throughout my development as a scholar, I believe I have maintained a level of professionalism without any negative partiality towards the current treatment of type II diabetes in women. This DNP project has amplified my desire to want to work with patient's male and female with diabetes. I have seen first hand how the use of the IPQ-R can assist in the treatment of diabetes in women and provide valuable feedback that providers can use to improve the quality of the patient provider interactions, yet add to their quality of life by providing the support necessary for successful outcomes. In the near future, I plan to continue my professional development by obtaining my diabetic educators certification working with the diabetic population, and continuing with the research of the IPQ-R in diabetes that has already been started.

Professional Development

Becoming a nurse was one of my life's goals because of my need to help others. Since becoming a nurse, I have continuously strived to become an agent of change to improve the way we currently do things using evidence-based practices as a guide. In my attempt to enhance my academic knowledge, I have expanded my capabilities, but have narrowed my focus to the diabetic population. Over the past six years, I have accomplished many goals, including the ones I included in my Bachelor degree

professional development plan (obtain a Masters in nursing, and a doctorate in either public health or research) to improve nursing practice.

As I look towards the future, I plan to work as a nurse practitioner in the primary care setting with diabetic patients and in women's health. I plan on joining a professional organization on diabetes management because I believe it will increase my knowledge and influence the way I treat diabetic patients. After all, joining a professional organization will advance my professional development by improving my communication. This will enable me to network with providers with similar interests. In addition, joining such an organization will provide me with skills I can use to contribute relevant information to group discussions and board conferences on diabetes treatment and women's health. As a result of this DNP project, I have been introduced to the top professionals in diabetes management at the University of Colorado.

As part of my post DNP professional development, I look forward to continuing the project I have already started, but on a much larger scale than before, including more diverse primary care practices and in-services on the IPQ-R with men. Once I acquire my doctorate, I hope to obtain a leadership role within my organization, and one day obtain a position within the political arena to help improve upon the standard of care we provide in the management of diabetes. By doing so I believe I can provide the diabetic population with a voice to hopefully improve the way we currently manage this chronic condition.

Summary

The DNP quality improvement project provides an entrance segway to the development of educational in-services on the use of the IPQ-R in the primary care setting. Based on the attitudes and opinions of the providers and the peer-reviewed literature, the IPQ-R in-service was used to increase provider awareness of the questionnaires and it's use in the treatment of type II diabetes in women. All of the providers felt that the educational in-service was helpful and that after the in-service, felt confident in using it in clinical practice because they gained a better understanding of the IPQ-R. The results of the DNP project highlighted the need for in-services on the IPQ-R in more primary care practice settings. Using the educational in-service provided a simple and concise method to educate primary care providers on the IPQ-R and it's use with women with type II diabetes.

The number of women with type II diabetes in increasing, and is a national health problem that has been identified to increase healthcare costs (Care, 2002). The educational in-service offers primary care providers a standardized way to educate staff and other providers about the IPQ-R and familiarize them with the benefits of its use in practice. The project identified the need for more research and in-services with a larger diverse group of primary care practices before disseminating the DNP student in-service for the IPQ-R in practice.

Section 5: Scholarly Product

The Use of the Illness Perception Questionnaire: Enhancing Clinical Staff Knowledge

By

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Introduction

Dissemination of the DNP scholarly product is a planned process that involves consideration of a target audience in which the project findings are received, and where communication with policy and health services will facilitate research uptake in to clinical practice (Wilson, Petticrew, & Calnan, 2010). My plan is to submit the manuscript (executive summary) to one or more online peer reviewed journals such as Women's Health and Midwifery and present findings to The Diabetes Research Foundation.

Objective: To familiarize primary care providers with the Illness Perception Questionnaire (IPQ-R) in the treatment of type II diabetes in women in the state of Colorado.

Method: The DNP scholarly project used an evidence-based approach in which to familiarize the primary care providers with the IPQ-R and assessed their feedback by utilization of a self-completed questionnaire after an educational in-service on the IPQ-R. The DNP project provided significant information in the education of primary care providers on the IPQ-R that may aid in the treatment of type II diabetes in women to improve patient care outcomes.

Background: The aim of the DNP project was to develop an education module for the use of the IPQ-R in clinical practice to enhance the knowledge base of providers caring for women with type two diabetes, to prevent future complications and improve their quality of life based on their perceptions (Broadbent et al., 2006).

Participants: Consisted of primary care providers with at least two years of experience in the care and treatment of type II diabetes in women. There were four physicians and three nurse practitioners (NP).

Results: All of the providers express whether the educational in-service presented by the DNP student was useful, and if they obtained a better understanding of the IPQ-R. The questionnaire may have an important effect on the way healthcare providers treat women with type II diabetes, and if they would use the questionnaire in their practice.

Key Words: The key words within this project are: Illness Perception Questionnaire Revision, Type II diabetes, Self-efficacy and Non-adherence.

Conclusions: The use of the IPQ-R in the primary care setting will identify the perceptions of illness in women to prevent future complications based on their perceptions. To validate the educational in-service, additional studies are essential in more diverse and larger practices.

Introduction

Many providers in primary care commonly treat type II diabetes in women, but find it difficult because of the amount of time that is necessary to provide patients with the proper support, and tools needed to manage their illness successfully (Care, 2002). Type II diabetes also known as adult–onset or non-insulin-dependent diabetes is a chronic

condition that affects the way the body metabolizes glucose, which is the bodies main source of fuel (Davidson & Moreland, 2013, p. 1). Women with this condition often find management of the illness quite difficult due to the large amount of information that is thrust at them during office visits, and the lack of support they receive both at home and from their healthcare providers (Li et al., 2014). The IPQ-R questionnaire is a useful tool that can provide information regarding the psychosocial factors such as perception of illness, patient vulnerability to complications, illness acuity and the efficacy of treatment that can be helpful in the management of this illness and prevent future complications based on the patient's perceptions (Delamater, 2006).

It is important to help primary care providers treat type II diabetes in women within the primary care setting by familiarizing them with the Illness Perception Questionnaire (Broadbent, Petrie, Main, & Weinman, 2006). Although there is a plethora of treatment information with diabetes and women's health, women are still not receiving the proper support and tools needed to address their psychosocial needs in the management of type II diabetes (Delamater, 2006). With more and more women being diagnosed with this condition, all providers should strive to communicate clearly and act as an advocate for these patients so that each woman with this condition feels they are receiving quality care and the tools to manage their illness successfully (Care, 2002). The goal in treating type II diabetes in women is to identify the perception of illness and begin addressing the identified needs of the patient as soon as possible, even if this requires further assessments to determine the psychosocial needs that can contribute to future complications (McSharry, Moss-Morris, & Kendrick, 2011).

Background & Objectives

Type II diabetes is one of the most common illnesses next to hypertension that is seen by primary care providers, and is the 7th major cause of death in the world ("Diabetes statistics," 2014). This illness often occurs in adults within the ages of 36-45 and older with the chances of it developing, increasing as one ages. As it currently sits, type II diabetes has been seen in all age groups including adolescents, children, and the elderly, but more and more often within middle age adults ("Diabetes statistics," 2014). Studies show that 82% of women with type II diabetes also have one or more conditions that further complicate and delay the successful treatment of their condition (Li et al., 2014). Approximately 13 million women have diabetes ranging from age 20 and older, which equals one in every 10 women have diabetes. Additionally, there is evidence that type II diabetes affects women differently than men, and that there is a vital psychosocial component to this illness that needs to be addressed in women more so than in men (Chow, Foster, Gonzalez, & Mclver, 2012).

There are more hospital admissions, emergency room visits, and work absenteeism from women with type II diabetes. The annual cost of type II diabetes in the United States is 245 billion dollars with direct and indirect healthcare costs ("Diabetes statistics," 2014). For women, the costs for provider office visits, medications, emergency visits, diagnostic tests, and out of pocket expenses totaled $7,900 for this illness opposed to $3,800 for a woman without type II diabetes ("American Medical Association," 2015, p. 6). The costs only increase when a woman with type II diabetes does not feel she has the support of her healthcare team. They often find they have more complications and

spend more money seeking the support necessary to manage the illness successfully and independently. Many women report this occurs after seeing two to three different primary care providers on average (Li et al., 2014).

Theoretical Framework

The common sense model (CSM) developed by Dr. Howard Levanthal provides a foundation to help providers understand the beliefs that are associated with women regarding diabetes and the various components that influence the implementation of provider initiated and self management goals and strategies. In addition, this model demonstrates how health and illness can be used to elicit understanding with both the patient's ability to manage and cope with their chronic condition, and the provider's management of type II diabetes in women (Paddison et al., 2010). The CSM was developed for the use of chronic conditions such as type II diabetes where there was a high incidence of emotional problems and lack of effective care. The CSM was developed to focus on three main areas which were (1) the account of the chronic illness experience that may guide, (2) action planning and coping strategies and performances followed by (3) appraisal, or monitoring of the success or failure of coping efforts" (Paddison et al., 2010, p. 2).

Project Method

The purpose of this evidence-based approach was to familiarize primary care providers with the Illness Perception Questionnaire (IPQ-R) in a primary care setting; and to educate them on the usage of the tool in clinical practice. For this project, a descriptive

design was utilized to describe the IPQ-R (Melnyk & Fineout-Overholt, 2005). The descriptive design was intended to explain, describe and predict a problem, issue or circumstance as it is during the time of the DNP project (Melnyk & Fineout-Overholt, 2005). The DNP student assumed the leadership role in the project and focuses the activities that are associated with this process, including the creation and evaluation of questionnaires.

The DNP project was carried out in two phases; the first being an in-service whereby the providers were familiarized with the IPQ-R. Preceding the start of the in-service, the providers were given a Demographic Questionnaire. In the second phase of the DNP project after the in-service, the providers then were given a self-completed yes/no questionnaire that measured both their knowledge and attitudes regarding the education provided in the in-service on the IPQ-R.

Data Analysis

The analysis of the data gathered after the in-service from the demographic questionnaire and the self-completed yes/no questionnaire provided significant information for this DNP project. Following the in-service on the IPQ-R, the demographic and self-completed questionnaires were collected. There were no personal identifiers included within the questionnaires that pertain to any of the participating individuals. The data analysis process included data input, coding, analysis, and reporting of results. The data analysis process utilized a descriptive analysis for the DNP project and was useful in providing frequencies, percentiles, and central tendencies in which to understand the behaviors observed for each individual variable and finding.

In regard to the project, the self-completed yes/no questionnaire used a nominal scale, and the majority of the information provided included binary data that used either yes/no answers or a short response. The responses to the questions on the self-completed questionnaire were coded and assigned a subject, and for each question on the survey requiring a yes/no response were assigned a percentage. For this type of data, frequency analysis was deemed most appropriate. The nominal data was analyzed using percentages, which were a representation of the most common responses. In addition, a frequency distribution was developed when the values were grouped into ranges, then those frequencies were expressed and represented on a chart.

Table 1

Demographic Survey

Variables	Number	Percent
Age:		
30	3	43%
40	1	14%
50	3	43%
Gender:		
Male	4	57%
Female	3	43%
Race/Ethnicity:		
White	5	71%
Hispanic	2	29%
Asian	0	0%
African American	0	0%
Education:		
Medicine	4	57%
NP	2	29%

DNP	1	14%
Marital Status:		
Married	7	100%
Non-Married	0	0%
Board Certification:		
MD (Family Practice)	2	28.5%
DO (Family Practice)	2	28.5%
NP (Family Practice)	3	43%
Years in Practice:		
0-5	2	28.5%
5-10	2	28.5%
10-20	3	43%
30-40	0	0%

Table 2: **Self-completed Survey on The Illness Perception Questionnaire**

Question Number	Question text
Question # 1	1. Do you use the Illness Perception of Illness Questionnaire (IPQ-R) with women diagnosed with type II diabetes in your practice?
Response:	Yes (0) participants No (7) participants
Question # 2	What factors contribute to the difficulty in treating type II diabetes in women in the primary care setting?
Response:	Other medical conditions; Not enough time; medication non-compliance; lack of support
Question # 3	Do you believe that this Illness Perception Questionnaire (IPQ-R) will assist you in treating type II diabetes in women in the primary care setting?
Response:	Yes (5) participants No (2) participants
Question # 4	Do you believe that the information provided in the in-service will assist in your treatment of women with type II diabetes?
Response:	Yes (6) participants No (1) participant
Question # 5	Did this in-service education provide you with the

	confidence to use the (IPQ-R) ?
Response:	Yes (7) Participants No (0) Participants
Question # 6	Do you feel that the educational in-service was helpful and provided you with a new perspective of type II diabetes treatment?
Response:	Yes (5) participants No (2) participants
Question # 7	After attending the in-service, do you feel that women with type II diabetes should be treated clinically using the IPQ-R ?
Response:	Yes (6) participants No (1) participants
Question # 8	Do you think that the IPQ-R can prevent behavioral complications associated with type II diabetes?
Response:	Yes (5) participants (identifies their weakness; identifies why they think a certain way; Identifies the why behind the what) No (2) participants (behaviors are a choice; perception of illness will not prevent free will; can counsel patients on behaviors without the IPQ-R)
Question # 9	Do you plan to implement the IPQ-R as part of your routine treatment process of type II diabetes in women?
Response:	Yes (4) participants No (3) participants
Question # 10	Are there resources available to support female patients in your practice and community?
Response:	Yes (0) No (7)
Question # 11	What barriers might prevent you from using the IPQ-R in your practice?
Response:	Time; lack of staff.

Discussion of Findings

The Demographic Variables

The variables included on the demographic questionnaire were gender, education, race/ethnicity, age, marital status, and years in practice. There is a 57% division between males and females. The participants were 57% medical doctors and 43% nurse practitioners with two of the three being prepared at the master's level, and one prepared at the doctoral level. The mean range of years in practice was 15, and the least amount of time in practice was 3 years. Five of the providers were white (71%), two are Hispanic (29%), and all of the providers were married. The mean age of the providers was 44 years.

Questionnaire

As aforementioned, following the IPQ-R in-service, the providers were given a self-completed questionnaire prepared by the DNP student from the evidence based literature, consisting of 10 questions, which consisted of a nominal yes, or no scale. The objective of the self-completed questionnaire was to collect information to investigate, assess and understand the experience of using the IPQ-R in treating type II diabetes in women.

The questionnaire was given to the participating providers and returned to the DNP student after the one-hour in-service. The results showed that all of the participating providers admitted that none of them use the IPQ-R in practice (100%). In response to second question, the answers received were: other medical conditions (HTN, kidney failure, and pain), time; not having enough time to address all the patients needs in one visit, lack of support; not enough resources available for patients, and medication non-compliance. This question demonstrated the lack of community resources and support

when treating type II diabetes in women. Thus making the treatment of this chronic condition difficult for both patients and providers, and is suggestive of additional resources to enhance the standards of care. An assessment tool such as the IPQ-R can be helpful in identifying areas to prevent future behavioral complications in the treatment of type II diabetes in women again, by focusing the visits to the specific need of the patients. The majority of the providers (71%) felt that the IPQ-R would be useful in the treatment of type II diabetes in women in the primary care setting; and 85% of the information provided during the in-service was found to be helpful in the treatment of this condition and provided the providers with the confidence to use the IPQ-R in practice. Prior to the in-service none of the providers were aware of the IPQ-R or its use in clinical practice. In addition, 85% of the providers said that after attending the in-service that women with type II diabetes should be treated clinically using the IPQ-R to increase outcomes and provide the mental support necessary for female patients.

The majority of the participating providers (57%) said they would utilize the IPQ-R in practice, but felt time was a huge restraint. All of the provider's stated that support groups and other community resources were greatly needed to make treatment more successful amongst women with type II diabetes, and that the IPQ-R would be a good tool to use in that process.

All the answers provided from the survey strengthened the need for the IPQ-R questionnaire in-service for primary care practice providers for the treatment of type II diabetes in women to provide a guideline in clinical practice. The IPQ-R if used in the

primary care setting will not only provide the provider's with confidence, but also provide patients with the psychosocial support that is currently lacking from their visits.

Implications for Evidence-Based Practice

Presently, primary care providers have limited time to diagnose, educate, and treat women with type II diabetes and assess their psychosocial needs. With the IPQ-R providers will have a means of identifying their patients most common perceptions and needs to help manage this illness more successfully (Care, 2002). This tool may help increase primary care provider awareness of the psychosocial needs of women with type II diabetes as well as address other deficits that maybe preventing them from successfully managing their condition. Due to the fact that this project was very small and limited to only one primary care practice, future research studies are needed to validate the IPQ-R in a larger and more diverse primary care practices. The results of this project will be favorable in providing information as to whether the in-service was useful and if the providers would use the IPQ-R in clinical practice.

Conclusion

Quality improvement in the care and management of diabetes is a priority in a lot of primary care outpatient clinics. The need to understand and address the source of the underlying issues in patient compliance has been directly related with perceptions of illness according to recent studies (Petrie et al., 2007). The research has already been done, so utilizing this tool to improve care, communication and adherence seems to be

the next step. The information gathered from this DNP project will help clinicians decide if this is a good fit or if we need to seek other avenues to improve quality of care.

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Appendix A: Demographic Questionnaire

Participant Number: _____ **Date:** _____

Instructions: Please check the answer that applies.

Gender: Male [ ] Female [ ]

Marital Status: Married [ ] Single [ ] Divorced [ ] Widowed [ ]

Age: 20-30 [ ] 30-40 [ ] 40-50 [ ] 50-60 [ ] 60-70 [ ] 70+ [ ]

Title: MD [ ] FNP [ ] ANP [ ] DNP [ ] PA [ ]

Education:

Nursing: BSN [ ] Masters [ ] NP [ ] DNP [ ]

Physician Assistant: Masters [ ] Doctoral Level [ ]

Physician: DO [ ] MD [ ]

Specialty: Family Practice [ ] Internal Medicine [ ] Diabetes Educator [ ]

Board Certification:

Yes [ ] No [ ] Please indicate area of Certification _____

Years in Practice (recorded in years): _____

Race/Ethnicity:

White [ ] African American [ ] Asian [ ] Pacific Islander [ ] Native American [ ]

Hispanic [ ] Other, please indicate: _____

Appendix B: Project Questions for Providers

1. Do you use the Illness Perception of Illness Questionnaire (IPQ-R) with women diagnosed with type II diabetes in your practice?

Yes [ ]

No [ ]

2 What factors contribute to the difficulty in treating type II diabetes in women in the primary care setting? _____

_____

3 Do you believe that this Illness Perception Questionnaire (IPQ-R) will assist you in treating type II diabetes in women in the primary care setting?

Yes [ ]

No [ ]

Why or why not? _____

_____

4. Do you believe that the information provided in the in-service will assist in your treatment of women with type II diabetes?

Yes [ ]

No [ ]

Why or why not? _____

_____

5. Did this in-service education provide you with the confidence to use the (IPQ-R) ?

Yes [ ]

No [ ]

6. Do you feel that the educational in-service was helpful and provided you with a new perspective of type II diabetes treatment?

Yes [ ]

No [ ]

If so, please explain

how_____

7. After attending the in-service, do you feel that women with type II diabetes should be treated clinically using the IPQ-R ? Yes [ ] or No [ ]?

8. Do you think that the IPQ-R can prevent behavioral complications associated with type II diabetes?

Why or why not?_____

_____

9. Do you plan to implement the IPQ-R as part of your routine treatment process of type II diabetes in women?

Why or why not? _____

_____

10. Are there resources available to support female patients in your practice and community?

Yes [ ]

No [ ]

What resources would help in your care of Women with Diabetes?

_____

_____

11. What barriers might prevent you from using the IPQ-R in your practice?

_____

_____

Any Comments/Questions?

_____

_____

_____

_____